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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,841	06/06/2005	Xiang Wu Cheng	HUANG04	8596
23900	7590	12/05/2006	EXAMINER	
J C PATENTS, INC.			CORDRAY, DENNIS R	
4 VENTURE, SUITE 250				
IRVINE, CA 92618			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 12/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/537,841

**Applicant(s)**

CHENG, XIANG WU

**Examiner**

Dennis Cordray

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 09 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments and amendments, filed 10/9/2006, with respect to the rejections of Claims 1-6 under 35 U.S.C. 103(a) have been fully considered and are persuasive. As Applicant argues on pp 8-9, the Samuelson reference fails to disclose a non-woody pulp or the claimed amount of silicic acid. Furthermore, Samuelson et al discloses a pretreatment using sulfuric acid and sodium sulfite prior to the oxygen digestion process. Since the remaining references used fail to remedy these deficiencies, the rejections of Claims 1-6 under 35 U.S.C. 103(a) have been withdrawn.

Applicant's amendments to the Abstract and Specification have overcome the objections.

Applicant's amendments to the claims have partially overcome the rejections under 35 U.S.C. 112, 2<sup>nd</sup> paragraph as being indefinite. However, the grounds for one of the rejections remain valid and are reiterated below. In addition, new grounds of rejection are made as detailed below.

Applicant has amended Claim 1 to change the term "anion silicic acid softener" to "anion silicate softener", arguing on pp 7-8 that the change reflects a more accurate translation of the corresponding term in the original PCT application. It is also noted that the certified Chinese reference supplied as a priority document uses the same characters as the original PCT application with reference to the silicic acid. Silicic acid comprises silicon, hydrogen and oxygen and has the general formula  $[\text{SiO}_x(\text{OH})_{4-2x}]_n$ . Silicates are compounds containing at least one central silicon atom and

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electronegative ligands, which ligands can be oxygen, hydroxyl, halogen, etc. The silicate can be charge balanced (e.g.-SiO<sub>2</sub>) or can have a negative electrical charge that is balanced by appropriate cationic species. The Specification supplied by the Applicant in the application does not contain the word silicate, but refers only to silicic acid. Thus silicic acid is a species of silicate and the amended claim language expands the breadth of the claim beyond that disclosed in the original Specification. Applicant is invited to supply a certified English translation of the original PCT for consideration to substantiate the argument of incorrect translation.

### ***Claim Objections***

Claims 2 and 3 are objected to because of the following informalities: In Claim 2, the word "a" preceding emulsion should be changed to "an". In Claim 2, the comma between "and" and "then" should be removed. In claim 3, the word "grounded" in step e) should be changed to "ground". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one

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skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Amended Claims 1 and 7 recite "anion silicate softener", which is not found in the originally filed Specification, which recites only "anion silicic acid softener", one species of silicate, as discussed above. Applicant is invited to supply a certified English translation of the original PCT for consideration to substantiate the argument of incorrect translation.

Amended Claim 3 recites "ambient temperature and pressure" in step d), whereas the originally filed Specification recites only "normal temperature and pressure" without further defining what constitutes a normal temperature and pressure. The temperature and pressure for the polymerization reaction of Capps (5133834, col 3, lines 1-10) for a non-woody pulping process is about 140 °C and about 70-150 psia. Capps also teaches that lower or higher temperature and pressure can be used as well, but the cooking times will be correspondingly longer or shorter. Thus, a "normal temperature and pressure" is not defined in the prior art, but a wide range of usable temperatures and pressures. If Applicant feels that "normal temperature and pressure" is an incorrect translation of the original PCT application, Applicant is invited to supply a certified English translation of the original PCT for consideration to substantiate an argument of incorrect translation. "Ambient temperature and pressure" are also indefinite terms that apply to the temperature and pressure of the environment in which the process is being conducted. Even if applied in its common usage of atmospheric temperature and pressure, the physical location (country, elevation, etc.) of the process

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equipment and the time of the year (winter, summer, etc.) can result in a broad variation in the "ambient temperature and pressure".

Claims 2 and 4-6 depend from and thus inherit the limitations of Claim 1.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 7 recite "anion silicate softener". It is not clear if the limitation is intended to mean an anionic softener comprising silicate, an anionic agent that softens silicates, an agent that softens anionic silicates or if another meaning is intended. The limitation is thus indefinite.

Claim 1 recites the composition of cooking aids as

0.01 wt% - 5 wt% ethanol and/or ether;

0.25 wt% - 35 wt% concentrated sulfuric acid and/or carbon tetrachloride;

0.15 wt% - 30 wt% of basic  $\text{Na}_2\text{SO}_3$ ; and

balance of water.

The concentration of non-aqueous components thus ranges from 0.41 wt% to 70 wt%. Claim 2 recites that the cooking aids are prepared by forming an emulsion thereof with concentration of 3% (assumed to be wt%) then mixing the emulsion with water,

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which further dilutes the solution. It is not clear how the cooking aids can have a concentration of up to 70 wt% if they are made by forming an emulsion at 3% concentration then further diluting with water. Since the process of Claim 2 cannot result in the product of Claim 1, Claim 2 is indefinite.

Claims 2 and 4-6 depend from and thus inherit the indefiniteness of Claim 1.

***Allowable Subject Matter***

Claims 1-7 would be allowable if rewritten or amended to overcome the Objections and the rejections under 35 U.S.C. 112, 1<sup>st</sup> and 2nd paragraphs, set forth in this Office action.

The following is a statement of reasons for the indication of allowable subject matter: The nearest prior art, Capps, 5133834 or 5366594, disclose processes for digestion and polymerization of non-woody material comprising multiple steps (last par of col 2 to col 3, 2<sup>nd</sup> par for both references). The raw material is treated with a sodium sulfite solution at specified temperature and pressure to break the raw material into cellulose, lignin and silica. The temperature and pressure are lowered and sodium bisulfite is added to adjust the pH. A sulfuric acid solution added, the temperature and pressure are again elevated, and the polymerization reaction conducted. There is no disclosure of the claimed composition in prior art or of conducting digestion and polymerization processes using a single stage. As the prior art generally conducts the processes as separate steps with adjustment of temperature, pressure and pH between

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the steps, it would not have been obvious to one of ordinary skill in the art to conduct the two processes simultaneously.

### **Conclusion**

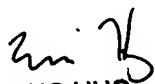
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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